

German Ballot Comments on ISO/CD 10303-14

ISSUE NUMBER: GER-1

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: Scope

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

Bi-directional mappings are within the Scope but not explicitly supported.

PROPOSED SOLUTION:

Describe an algorithm how to derive reverse mappings or remove it from Scope.

ISSUE NUMBER: GER-2

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 3.3.1, 3.3.2

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

Definition in clauses 3.3.1 and 3.3.2 is circular.

PROPOSED SOLUTION:

Clarify definition of 'binding instances' and 'binding extend'.

ISSUE NUMBER: GER-3

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 3.3.5, 3.3.6

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

Definition in clauses 3.3.5 and 3.3.6 is circular.

PROPOSED SOLUTION:

Clarify definition of 'qualified binding extent' and 'selection criteria'.

ISSUE NUMBER: GER-4

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 4.4.1

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

Section 4.1.1 does not contain anything about the lexical aspects of the language.

PROPOSED SOLUTION:

Find a better name for this section.

ISSUE NUMBER: GER-5

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 7

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

Chapter 7 contains only three sentences and seems to be incomplete.

PROPOSED SOLUTION:

ISSUE NUMBER: GER-6

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 8

CLASSIFICATION: MINOR EDITORIAL

DESCRIPTION:

Chapter 8 is misplaced.

PROPOSED SOLUTION:

Move Chapter 8 before Chapter 7

ISSUE NUMBER: GER-7

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 8.1

CLASSIFICATION: MINOR EDITORIAL

DESCRIPTION:

TYPE_MAPs are not part of the EXPRESS-X language.

PROPOSED SOLUTION:

Remove ' , or type maps' from the last sentence in Clause 8.1.

ISSUE NUMBER: GER-8

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 8.3

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

This definition is one of the fundamentals, but the text is not sufficient. The definition of the binding process is just two sentences with diffuse meaning.

PROPOSED SOLUTION:

Provide an exact definition of the binding process with examples.

ISSUE NUMBER: GER-9

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 9.2.1

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

This Clause is completely confusing:

The headline is about binding extents, the first syntax part is about partition-headers, the first definition explains the binding extent using binding instances, which have not been introduced. The FROM relates back to the syntax part, the text says in English what the syntax already contains.

PROPOSED SOLUTION:

ISSUE NUMBER: GER-10

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 9.2.1

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

This Clause is completely confusing:

The headline is about binding extents, the first syntax part is about partition-headers, the first definition explains the binding extent using binding instances, which have not been introduced. The FROM relates back to the syntax part, the text says in English what the syntax already contains.

PROPOSED SOLUTION:

ISSUE NUMBER: GER-11

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 9.2.1

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

What is 'structure of instances'?

PROPOSED SOLUTION:

Provide a definition for that.

ISSUE NUMBER: GER-12

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com
CLAUSE: 9.2.2
CLASSIFICATION: MINOR TECHNICAL
DESCRIPTION:
Change IDENTIFIED_BY to IDENTIFIED BY, like SUBTPYE OF
PROPOSED SOLUTION:

ISSUE NUMBER: GER-13
AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com
CLAUSE: 9.2.2
CLASSIFICATION: MINOR TECHNICAL
DESCRIPTION:
Change IDENTIFIED_BY to IDENTIFIED BY, like SUBTPYE OF
PROPOSED SOLUTION:

ISSUE NUMBER: GER-14
AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com
CLAUSE: 9.3
CLASSIFICATION: MAJOR EDITORIAL
DESCRIPTION:
It is not clear why there are two concepts VIEW and MAPs in the EXPRESS-X.
PROPOSED SOLUTION:
Add a description to 9.3 and 9.4 why/for what each concept is needed.

ISSUE NUMBER: GER-15
AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com
CLAUSE: 9.3
CLASSIFICATION: MAJOR EDITORIAL
DESCRIPTION:
It is not clear why there are two concepts VIEW and MAPs in the EXPRESS-X.
PROPOSED SOLUTION:
Add a description to 9.3 and 9.4 why/for what each concept is needed.

ISSUE NUMBER: GER-16
AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com
CLAUSE: 9.4.2
CLASSIFICATION: MAJOR EDITORIAL
DESCRIPTION:
It's unclear for what RETURN maps are needed.
PROPOSED SOLUTION:

ISSUE NUMBER: GER-17
AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com
CLAUSE: 9.4.2
CLASSIFICATION: MAJOR EDITORIAL
DESCRIPTION:
It's unclear for what RETURN maps are needed.
PROPOSED SOLUTION:

ISSUE NUMBER: GER-18
AUTHOR: Markus Maier, PD Tec, maier@pdtec.de
CLAUSE: 9.4.4
CLASSIFICATION: MAJOR TECHNICAL
DESCRIPTION:

The partition construct as it is defined currently adds not much value to the language but unnecessary complexity.

PROPOSED SOLUTION:

Either remove this concept or allow explicit bindings without partition qualifier. Describe a mechanism how the partition is selected and if/how multiple partitions may be executed. In combination with MAP inheritance this would be very useful for mapping SELECT source types.

ISSUE NUMBER: GER-19

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 9.4.5

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

This Clause is incomplete and completely confusing, especially the following subjects:

PROPOSED SOLUTION:

ISSUE NUMBER: GER-20

AUTHOR: Bernd Ingenbleek, EuroSTEP, bernd.ingenbleek@eurostep.com

CLAUSE: 10.4

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

This Clause is completely unclear and needs to be clarified.

PROPOSED SOLUTION:

ISSUE NUMBER: GER-21

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: 12

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

This Clause is incomplete. The visibility rules for MAPs, instantiation loops, SCHEMA_MAPs, FOR expressions are completely missing.

PROPOSED SOLUTION:

ISSUE NUMBER: GER-22

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: 9.4.5

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

It is not clear if it is allowed to re-assign a target attribute in a subtype MAP.

PROPOSED SOLUTION:

Allow re-assignments, fix execution order of assignments.

ISSUE NUMBER: GER-23

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: 9.4.5

CLASSIFICATION: MAJOR TECHNICAL

DESCRIPTION:

The mapping of SELECT types (source or target) is currently very inconvenient.

PROPOSED SOLUTION:

Allow SUPERTYPE maps to have SELECT or GENERIC types as target. Allow RETURN MAPs to have simple named types as target for better SELECT type mapping support.

Allow the subtypes MAPs for partition MAPs to support the mapping of SELECT types in the source and target schema.

ISSUE NUMBER: GER-24

AUTHOR: Markus Maier, PD Tec, maier@pdtec.de

CLAUSE: 10.5

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

The concept of parallel iteration is superfluous and can be always replaced by indexing.

PROPOSED SOLUTION:

Remove that construct.

ISSUE NUMBER: GER-25

AUTHOR: Markus Maier, PD Tec, maier@pdtec.de

CLAUSE: 10.5

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

It is unclear what happens if a FOR expression is assigned 2 or more times to a target attributes.

PROPOSED SOLUTION:

It would be useful if the result of the FOR expression would be added to the target aggregate instead of assigning it and removing existing elements.

ISSUE NUMBER: GER-26

AUTHOR: Markus Maier, PD Tec, maier@pdtec.de

CLAUSE: 10.5

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

It is unclear what happens for IF expression without ELSE branch. Is the target attribute set to indeterminate or is it left unchanged?

PROPOSED SOLUTION:

Add a note that the attribute is left unchanged if the IF condition is not satisfied.

ISSUE NUMBER: GER-27

AUTHOR: Markus Maier, PD Tec, maier@pdtec.de

CLAUSE: 10.7

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

It is unclear what happens for CASE expression without OTHERWISE branch. Is the target attribute set to indeterminate or is it left unchanged?

PROPOSED SOLUTION:

Add a note that the attribute is left unchanged if there is no OTHERWISE and none of the case conditions is satisfied.

ISSUE NUMBER: GER-28

AUTHOR: Markus Maier, PD Tec, maier@pdtec.de

CLAUSE: 9

CLASSIFICATION: MAJOR TECHNICAL

DESCRIPTION:

Often the same expression within a WHERE or SELECT clause is needed several times. If there are complicated expression (like path expressions, or function calls that require a lot of time to compute), the mapping can get very unreadable and inefficient.

PROPOSED SOLUTION:

To make mappings more readable and efficient the concept of LOCAL variables within MAPs should be added to the language.

The LOCAL section should be similar to the EXPRESS local variable section and should (optionally) precede the FROM or IDENTIFIED_BY clause of a MAP.

A LOCAL variable is visible within the IDENTIFIED_BY; WHERE and SELECT clause of a MAP and is inherited to subtype MAPs. The initialization of a local variable is executed before the MAP's WHERE clause is evaluated. Within the MAP body the LOCAL variable can be used on the left or right side of assignments.

ISSUE NUMBER: GER-29

AUTHOR: Markus Maier, PDTec, maier@pdtec.de

CLAUSE: 9

CLASSIFICATION: MAJOR TECHNICAL

DESCRIPTION:

Sometimes nested aggregates need to be unnested: It is not possible to use a partial explicit binding or any other aggregate as RETURN expression in a FOR EACH loop or to MAP a nested aggregate to a non-nested.

PROPOSED SOLUTION:

Add a built-in function unnest as already defined in Annex E.

ISSUE NUMBER: GER-30

AUTHOR: Markus Maier, PDTec, maier@pdtec.de

CLAUSE: 9

CLASSIFICATION: MAJOR TECHNICAL

DESCRIPTION:

It is not clear what happens if a global CONSTANT is referenced by a target instance attribute.

PROPOSED SOLUTION:

Global constants should be added to the target population if they are referenced by target instances.

ISSUE NUMBER: GER-31

AUTHOR: Markus Maier, PDTec, maier@pdtec.de

CLAUSE: 9.4.7

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

The semantics IDENTIFIED_BY within DEPENDENT_MAPs is unclear.

PROPOSED SOLUTION:

ISSUE NUMBER: GER-32

AUTHOR: Markus Maier, PDTec, maier@pdtec.de

CLAUSE: 6.2

CLASSIFICATION: MINOR EDITORIAL

DESCRIPTION:

The EXTENT built-in function, CREATE and END_CREATE are missing in Table 1.

PROPOSED SOLUTION:

Add keywords to table.

ISSUE NUMBER: GER-33

AUTHOR: Markus Maier, PDTec, maier@pdtec.de

CLAUSE: 10.6

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

For complex conditions deeply nested IF / ELSE clauses are needed.

PROPOSED SOLUTION:

Add ELSIF keyword for more convenient use the IF / ELSE expression.

ISSUE NUMBER: GER-34

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: 10.5

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

The FOR EACH inst IN <extent_reference> is confusing, especially the scope rules are completely unclear.

PROPOSED SOLUTION:

The extend_reference construct could be completely replaced by the explicit use of the EXTENT built-in function.

ISSUE NUMBER: GER-35

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: 9.7

CLASSIFICATION: MAJOR EDITORIAL

DESCRIPTION:

The example does not correspond to the syntax.

PROPOSED SOLUTION:

update example

ISSUE NUMBER: GER-36

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: 9.10

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

This clause states that procedures may be defined for use within the body of MAP declarations, but the current syntax does not allow this.

PROPOSED SOLUTION:

Change syntax to allow procedure calls within MAP declarations.

ISSUE NUMBER: GER-37

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: 9

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION:

It is not clear what happens if a local instance that was created within a function and is returned by that function is assigned to an attribute of a target instance of a MAP.

PROPOSED SOLUTION:

The instances should be added to the target population if it is referenced by an attribute of a MAP target instance:

ISSUE NUMBER: GER-38

AUTHOR: Markus Maier, PDTEC, maier@pdtec.de

CLAUSE: B.2

CLASSIFICATION: MINOR TECHNICAL

DESCRIPTION: Within MAPs it is possible to avoid avoid name clashes if source and target types have the same names by using a type_reference (Grammar Rule 218), but this construct can not be used for FUNCTION and PROCEDURE parameters or local variables.

PROPOSED SOLUTION:

Change the grammar, so that type_references (schema_name.type_name) are also allowed for FUNCTION and PROCEDURE parameters and local variable declarations as well as for global CONSTANTS.